REMARKS
Request for Continued Examination

This amendment is provided as a submission in conjunction with an RCE.

Status of Claims

Upon entry of this amendment, claims 2, 4 – 10, 18, and 19 are the only remaining claims. Claims 2, 18, and 19 are the independent claims.

Claim Rejections – 35 USC 112

The claims have been amended to address the 35 USC 112 issues raised by the Examiner. It is respectfully submitted that amended claims are in full accordance with 35 USC 112.

Claim Rejections - 35 USC 102 / 103

It is respectfully submitted that the above amendments conform the claims to the arguments previously presented and reiterated herein. In particular, the claims have been amended to clarify the fact that, according to the present development, variations in load are *derived through the change in the resonance frequency as indicated by a change in the measured phase* (ϕ_{PC}) = dynamic phase (ϕ_P) – feed phase (ϕ_C), and that the system adjusts the controlled voltage (V_M) so that the value of the measured phase (ϕ_{PC}) = 0. The cited documents do not disclose or suggest such a system as noted below.

Tojo requires external measurement of the piston's position (see e.g., FIG. 7, S12 (Obtain position present value Pnow from *position sensor* information) and col. 8, lines 1 - 2 (In step S2, position present value Pnow is detected by *position sensor 5* . . . .) Tojo also discloses external reference to the actual temperature of the refrigerator or other space being cooled and comparison of same to a target temperature – see Tojo FIG. 11, S10 and also col. 12, lines 5 – 13.

Yoo is also different from the presently claimed system. Yoo compares the current stroke magnitude value of the piston to a pre-stored reference stroke magnitude value that was previously discovered to be in an efficient resonance range, and adjusts a piston stroke control signal to always maintain the current stroke magnitude value equal to the desired pre-stored reference stroke magnitude value. See FIG. 2 wherein the stroke detector 120 provides input to a comparator 171 that also receives the pre-stored

reference stroke value 160, and the stroke control unit 172 that *seeks to maintain these two values in equilibrium*.

Yoshida requires use of an "Amplitude Detector 10" (FIG. 1) which feeds a detected piston amplitude signal to an "Amplitude Controller 11." This amplitude detector derives/calculates piston stroke amplitude from the current and voltage values provided by the "Current Detector 8" and the "Voltage Detector 9" as also shown in FIG. 1. *Like Yoo, Yoshida compares the actual calculated piston amplitude to a pre-stored "instructed amplitude" (see FIG. 2, S103) to maintain the piston stroke almost constant.* Thus, Yoshida does not disclose or suggest controlling the system based upon a change in the resonance frequency as recited in the present amended claims – Yoshida controls the system based upon a derived/calculated amplitude of piston stroke.
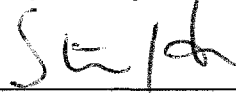
It is respectfully submitted that Dorman also does not disclose or suggest a system in accordance with the amended claims, whether taken alone or in combination with Tojo, Yoshida, or Yoo.

Based upon the above amendments and remarks, it is respectfully submitted that that pending claims are now in condition for allowance.

Conclusion

Based upon the above amendments and remarks, it is respectfully submitted that all claims are now in condition for allowance and that this application meets all other statutory requirements. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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